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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,144	10/28/2003	Peter Van De Witte	NL 000326A	6435

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EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT PAPER NUMBER

2871

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,144

Applicant(s)

VAN DE WITTE ET AL.

Examiner

Tarifur R Chowdhury

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 18 and 19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/860,356.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/860,356, filed on 05/18/01. ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation such as the light-absorbing layer being located between the color selection layer and the active switching elements must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

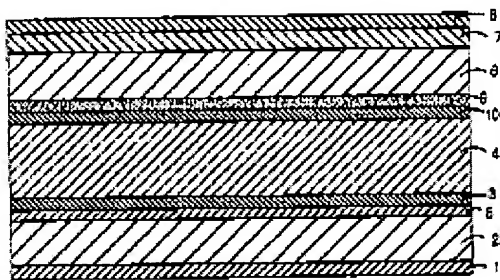
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 18 is rejected under 35 U.S.C. 102(e) as being anticipated by Kim, USPAT 6,671,016.

6. Kim discloses (col. 2, lines 64-67; col. 3, lines 1-8, 19-38) and shows in Fig. 1, a reflective active matrix liquid crystal display device comprising a liquid crystal layer (4) dispersed between an active (2) and a passive substrate (6) plate,

the active substrate plate (2) being present on the side opposite the viewing side and comprising a plurality of optically transparent pixel electrodes (3) and a plurality of active switching elements (not shown) for controlling the voltage supplied to the pixel electrodes,

FIG.1



the switching elements being spatially separated from, positioned subjacent, and electrically connected to the plurality of pixel electrodes (not shown) (col. 3, lines 31-38),

wherein the spaces separating the switching elements and the pixel electrodes is filled with an electrically insulating color selection layer (5) which selectively reflects light of particular wavelengths and renders the switching elements invisible to the light reflected.

Accordingly, claim 18 is anticipated.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhong et al., (Zhong), USPAT 6,365,916 in view of Narita et al., (Narita), USPAT 5,555,114.

10. Zhong discloses referring to Figs. 4 and 5 and related text, an active matrix liquid crystal display device comprising a liquid crystal layer (45) dispersed between an active (19) and a passive substrate plate (51),

the active substrate plate (19) being present on the side opposite the viewing

side and comprising a plurality of optically transparent pixel electrodes (3) and a plurality of active switching elements (9) for controlling the voltage supplied to the pixel electrodes (3) (Fig. 4),

the switching elements (9) being spatially separated from, positioned subjacent, and electrically connected to the plurality of pixel electrodes (3),

wherein the spaces separating the switching elements and the pixel electrodes is filled with an electrically insulating color selection layer (101, 102, 103).

Zhong further discloses that a backlight is typically provided at the back of the display and thus does not explicitly disclose that the display is operating as a reflection type display. However, it is common and well known in the art that a reflection type display does not require a backlight and thus reduce power consumption and provide a display that is thin and light weight. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to not include a backlight so that the display is operable as a reflection type display and reduce power consumption and provide a display that is light weight and thin.

Still lacking is the limitation such as the color layer selectively reflects light of particular wavelengths meaning the color filter is a cholesteric color filter.

Narita discloses a liquid crystal display with cholesteric color filters. Narita also discloses that by providing cholesteric color filters it is possible to obtain a color liquid crystal display for practical usage with higher usage efficiency of light (col. 2, lines 15-27).

Narita is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use a cholesteric color filter.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of Zhong by substituting the color filter with a color selection layer for selectively reflecting light of particular wavelengths and rendering the switching elements invisible to the light reflected so that a liquid crystal display for practical usage with higher usage efficiency of light is obtained, as per the teachings of Narita.

Accordingly, claim 18 would have been obvious.

As to claim 19, Zhong discloses that the liquid crystal display device further includes a light absorbing layer (41) for absorbing light transmitted by the color selection layer.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) USPAT 6,717,639 (filing date is after the effective filing date of the instant application) is related to a reflection type liquid crystal display wherein the separation between the pixel electrode and the switching element is filled with a color selection layer.

b) USPAT 6,466,281, USPAT 6,031,512 and USPAT 5,818,550 are related an active matrix liquid crystal display wherein there is a color filter and a passivation layer between the pixel electrode and the switching elements.

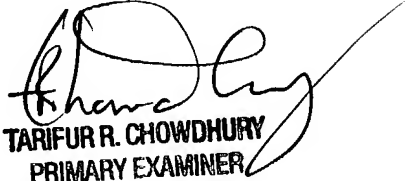
c) USPAT 6,016,178 is related a reflection type liquid crystal display wherein the pixel electrode is reflective and a color layer as well as a passivation layer is formed between the pixel electrode and the switching elements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC
May 05, 2004


TARIFUR R. CHOWDHURY
PRIMARY EXAMINER